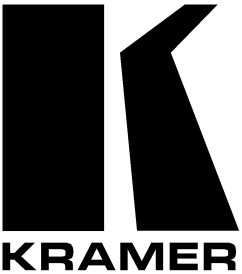
Kramer Electronics, Ltd.



USER MANUAL

Model:

810

Color Bar / Audio Generator

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1 Introduction

Dedication by Kramer Electronics since 1981, to the development and manufacture of high quality video/audio equipment, makes the Kramer line an integral part of the finest production and presentation facilities in the world. In recent years, Kramer has redesigned and upgraded most of the line, making the best even better! The Kramer line of professional video/audio electronics is one of the most versatile and complete available, and is a true leader in terms of quality, workmanship, price/performance ratio and innovation. In addition to our high quality Kramer TOOLS, we also offer excellent distribution amplifiers, remote controllers, switchers and matrices, processors, interfaces and computer-related products.

Congratulations on purchasing your Kramer **810** *Color Bar / Audio Generator*! This product is ideal for the testing and aligning of video equipment, including monitors, recorders and projectors.

The package includes the following items:

- **810** Color Bar / Audio Generator
- Power adapter (12V DC Input)
- This user manual
- Kramer concise product catalog/CD

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual

3 Your Color Bar / Audio Generator

The **810** Color Bar / Audio Generator produces a high quality color bar in composite video format[1] and s-Video format[2].

In addition, the **810** Color Bar / Audio Generator:

- Provides a 1 kHz balanced audio output[3] for audio equipment alignment

1 Composite video outputs on 2 BNC connectors, items 2 and 3 in Figure 1

2 s-Video (Y/C) output on a 4P connector, item 4 in Figure 1

3 You can also use this output as unbalanced audio output

- Enables you to determine the video output standard, PAL or NTSC, by using the PAL/NTSC selector switch[1]

Achieving the best performance means:

- Connecting only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoiding interference from neighboring electrical appliances that may adversely influence signal quality
- Positioning your Kramer **810** Color Bar / Audio Generator in a location free from moisture and away from excessive sunlight and dust

Figure 1 and Table 1 define the **810** Color Bar / Audio Generator:

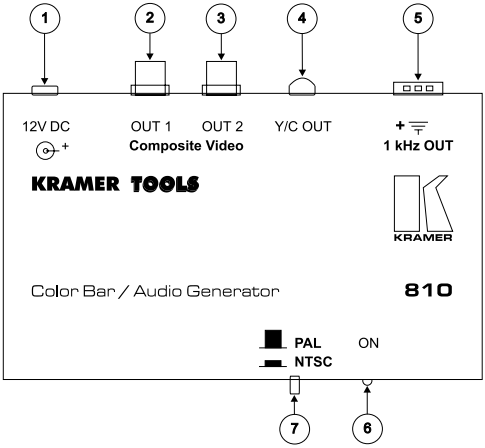

Figure 1: 810 Color Bar / Audio Generator

Table 1: Features and Functions of the 810 Color Bar / Audio Generator

#	Feature	Function
1	12V DC	+12V DC connector for powering the unit
2	OUT 1 BNC Connector	2 Composite video outputs
3	OUT 2 BNC Connector	
4	Y/C OUT 4P Connector	s-Video output
5	1 kHz OUT 3-PIN Terminal Block Connector	Balanced (or unbalanced) audio output
6	ON LED	Illuminates when receiving power
7	PAL / NTSC Selector Switch	Selects PAL when released; selects NTSC when pushed in

1 Item 7 in Figure 1

4 Connecting the Color Bar / Audio Generator

To use your **810** Color Bar / Audio Generator, connect one or more of up to 4 outputs[1], as follows:

1. Connect the composite video BNC OUT 1 connector to the composite acceptor (for example, a monitor).
2. Connect the composite video BNC OUT 2 connector to the composite acceptor (for example, an s-Video recorder).
3. Connect the s-Video (Y/C) 4P Y/C OUT connector to the s-Video (Y/C) acceptor (for example, a monitor).
4. Connect the 3-wire cable to the detachable terminal block 1 kHz OUT connector and to the audio input of the destination unit.
5. Connect the 12V DC power adapter to the power socket[2] and connect the adapter to the mains electricity.

Figure 2 illustrates how to connect the **810** Color Bar / Audio Generator:

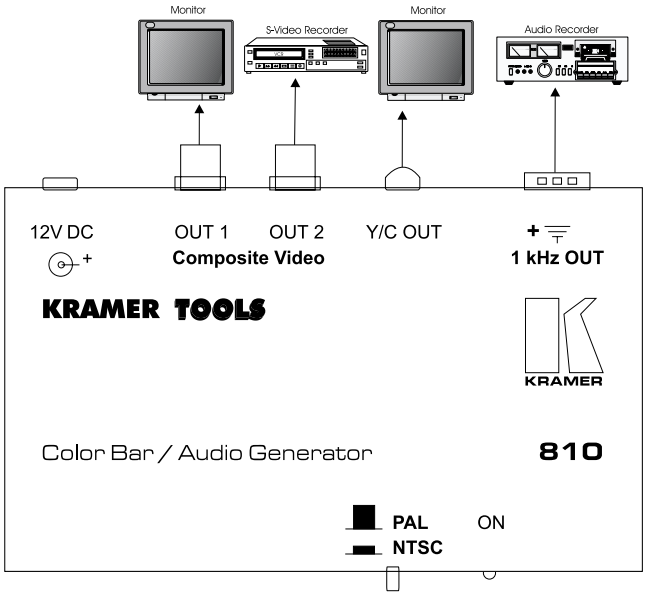

Figure 2: Connecting the 810 Color Bar / Audio Generator

1 You do not have to connect all the outputs

2 Item 1 in Figure 1

5 Adjusting the Audio Level

The **810** unit comes factory pre-set at 4dBm. However, you can adjust the audio level on your **810** Color Bar / Audio Generator, if you wish.

To adjust the audio level:

1. Insert a screwdriver into the small hole on the underneath of the **810** Color Bar / Audio Generator, enabling access to the trimmer.
2. Carefully rotate the screwdriver, trimming the **810** unit and adjusting the audio level, as required.

Figure 3 illustrates the position of the small hole on the underneath of the **810** Color Bar / Audio Generator:

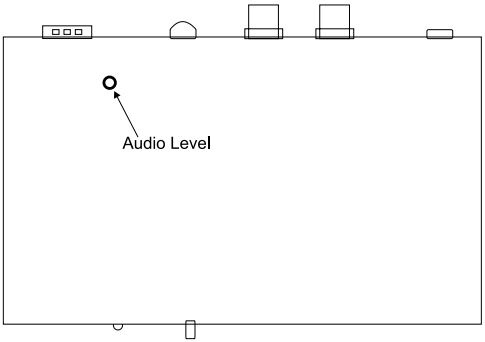

Figure 3: Underside of the 810 Color Bar / Audio Generator

6 Technical Specifications

Table 2: Technical Specifications of the 810 Color Bar / Audio Generator

Video Outputs:	2 x 75% color bar on BNC connectors; 1Vpp / 75Ω 1 x 75% s-Video color bar on 4P connector, 1Vpp / 75Ω (luma)
Audio Outputs:	1kHz, 4dBm / 47Ω balanced audio on detachable terminal block
Control:	PAL / NTSC selector switch
Video S/N Ratio:	62dB
Line Jitter:	2ns
Dimensions:	12 cm x 7.5 cm x 2.5 cm (4.7 inch x 2.95 inch 0.98 inch, W, D, H)
Power Source:	12V DC, 230 mA
Weight:	0.3 kg (0.67 lbs.) approx
Accessories:	Power Adapter

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for three years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
   - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
   - ii) Product modification, or failure to follow instructions supplied with the product
   - iii) Repair or attempted repair by anyone not authorized by Kramer
   - iv) Any shipment of the product (claims must be presented to the carrier)
   - v) Removal or installation of the product
   - vi) Any other cause, which does not relate to a product defect
   - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.
NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.
This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC Rules and Regulations: Part 15: "Radio frequency devices Subpart B – Unintentional radiators"

CAUTION!

- ⌧ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ⌧ Use the supplied DC power supply to feed power to the machine.
- ⌧ Please use recommended interconnection cables to connect the machine to other components.

For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found.
We welcome your questions, comments and feedback.

Safety Warning:
Disconnect the unit from the power supply before opening/servicing.

P/N: 2900-006003 Rev: 1

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P/N: 2900-006003 REV 1